DR-55. SYNTHESIS, SPECTROSCOPIC CHARACTERIZATION AND MOLECULAR DOCKING STUDIES OF 2-BUTYL-4-CHLORO-5-FORMYLIMIDAZOLE THIOSEMICARBAZONE COBALT (II) COMPLEX

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A novel 2-Butyl-4-chloro-5-formylimidazole thiosemicarbazone cobalt (II) complex is synthesized and characterized by using spectroscopic techniques like elemental analysis, FT-IR, HRMS, electronic spectral analysis and Powder-X-ray diffraction. The Co (II) complex is found to be highly efficient in inhibiting the growth of human pathogens like *S. aureus*, *B. megaterium* with MIC value 12,0 μg/mL whose inhibition zones are almost comparable with the standard antibiotic. The synthesized complex well occupy in the active site of β-ketoacyl-acyl carrier protein synthase III enzyme (PDB: 1MZS), in consists of catalytic triad and adenine-binding site, so the designed compounds are promising for to treat bacterial infection.